section **28** is used to drive the fan section **22** and the compressor section **24**. The remainder of the air flow entering the engine **10** passes through the fan section **22**, but bypasses the core engine, and produces a large portion of the engine thrust.

The fan section **22** includes a plurality of fan blades **30** (one shown in FIG. **2**) that extend radially outwardly from a rotor disk **32**. The rotor disk **32** is rotatively supported on a stationary front frame **34** (also known as a fan frame). The front frame **34** includes an annular fan casing **36** that surrounds the fan section **12**. A core engine casing **38** surrounds the core engine.

As seen best in FIGS. **2** and **3**, the forward mount **18** includes a mounting frame **40** that is fixedly joined to the pylon **16** by conventional means such as bolts. A first triangular clevis **42** is pivotally joined to one end of the forward mounting frame **40**, and a second triangular clevis **44** is pivotally joined to the other end of the forward mounting frame **40**. The first triangular clevis **42** is fixedly joined to the fan casing **36** at a first location, and the second triangular clevis **44** is fixedly joined to the fan casing **36** at a second location which is spaced circumferentially from the first location.

As seen best in FIGS. **2** and **4**, the aft mount **20** includes a mounting frame **46** that is also fixedly joined to the pylon **16** by conventional means such as bolts. The aft mounting frame **46** includes first and second axially spaced flanges **48** and **50** extending downwardly from a pylon interface section **52**. The two flanges **48** and **50** are arranged side-by-side to define a clevis. Two links **54** are used to join the engine **10** to the aft mounting frame **46**. Specifically, each link **54** is joined at one end to the aft mounting frame **46** (between the flanges **48** and **50**) and is joined at the other end to the core engine casing **38**. The two links **54** are each inclined from a tangent to the core engine casing **38**, in the vertical or axial plane, in opposite directions to one another. In this way, the links **54** straddle the core engine casing **38** generally symmetrically with respect to the engine centerline axis **12**. Engine vertical, lateral and roll loads are thus reacted through the links **54**.

The aft mount **20** further includes a single thrust link **56** for reacting thrust generated by the engine **10**. The thrust link **56** is joined at one end to a forward extending flange **58** on the aft mounting frame **46** and is joined at the other end to the front frame **34** via a thrust yoke **60**. The thrust yoke **60** includes a central flange **62** for attaching to the end of the thrust link **56** and two mounting pads **64** that are fixedly joined to the front frame **34** by conventional means such as bolts. The aft mount **20** also includes a waiting failsafe arrangement **66** (FIG. **2**). The waiting failsafe arrangement **66** does not normally bear axial loads, but is provided solely for reacting axial loads upon failure of the thrust link **56**, which is the primary axial loadpath.

Referring now to FIGS. **5** and **6**, the waiting failsafe arrangement **66** includes a single lug **68** formed on the outer surface of the core engine casing **38** and extends radially outward. The lug **68** and is disposed between the flanges **48** and **50** and is circumferentially aligned with the middle of the flanges **48** and **50** so as to be centered between the two links **54**. Each flange **48** and **50** has a bolt hole formed therein, and the lug **68** has a bolt hole **70** formed therein that is aligned with the flange bolt holes. A bolt **72** extends through the flanges and the lug bolt hole **70** for connecting the lug **68** to the flanges **48** and **50**. The bolt **72** is retained by a nut **74** threaded thereon. This nut-and-bolt arrangement generally secures the lug **68** relative to the aft mounting frame **46**, although the bolt hole **70** is slightly larger than the outside diameter of the bolt **72** so as to allow the lug **68** to slide axially (forward or aft) along the bolt **72**.

The lug **68** has a forward surface **76** facing the first flange **48** and an aft surface **78** facing the second flange **50**. Lands **80** are formed on both the forward and aft surfaces **76, 78**. As seen best in FIG. **6**, the lands **80** are located adjacent to the bolt hole **70**, although the lands **80** are not limited to this location on the lug **68** for reasons that will become clear. The height of the lands **80** is such that the lug **68** has a predetermined overall thickness at the lands **80** that is less than the distance between the two flanges **48** and **50**. This results in nominal axial gaps between each flange **48** and **50** and the corresponding land **80** that prevent inadvertent axial or thrust loading of the waiting failsafe arrangement **66** when the primary thrust loadpath (i.e., the single thrust link **56**) is functioning. In the event of failure of the thrust link **56** during engine operation, the engine **10** will translate forward until the lug **68** contacts the forward flange **48** and the forward axial gap is closed. The forward thrust load is then transmitted from the engine lug **68** to the forward flange **48** and to the aircraft pylon **16**. During a landing when reverse engine thrust is employed, the engine **10** will translate aftward until the lug **68** contacts the aft flange **50** and the aft axial gap is closed. The reverse thrust load is then transmitted from the engine lug **68** to the aft flange **50** and to the aircraft pylon **16**.

The lug **68** is designed to withstand the axial loads that will be generated by the engine thrust. To this end, the lug **68** is tapered (as seen best in FIG. **5**) so as to be thicker at its base than at its distal end. Providing the lug **68** with a thicker, tapered base increases its bending resistance. The inside corners of the two flanges **48** and **50** are chamfered to provide clearance between the tapered portion of the lug **68** and the flanges **48** and **50**. This assures that contact between the lug **68** and either flange **48, 50** will only occur at the lands **80**. Thus, use of the lands **80** allows the designer of a particular mounting system to know exactly where along its radial length the lug **68** will contact either flange **48, 50**. This permits the designer to reliably calculate the bending stress or moment arm that the lug **68** will be subjected to for a given thrust load. Accordingly, the lug **68** can be designed to have sufficient strength to withstand expected thrust loads.

The foregoing has described an aircraft engine mounting that provides thrust loadpath failsafe protection while having only one thrust link. The mounting system reduces overall part count and complexity, which results in significant weight and cost savings. Another benefit of the present invention is a reduction in engineering time and cost to design and analyze the mounting system. While specific embodiments of the present invention have been described, it will be apparent to those skilled in the art that various modifications thereto can be made without departing from the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. A mount for mounting an aircraft engine having an engine casing to an aircraft, said mount comprising:

a mounting frame having first and second flanges spaced apart a predetermined distance;

a lug formed on said engine casing, said lug being disposed between said first and second flanges and having a thickness that is less than said distance between said first and second flanges; and

a bolt connecting said lug to said first and second flanges, wherein said lug is capable of sliding axially along said bolt.